Copyright

Submission of a manuscript implies: that the work described has not been published before (except in the form of an abstract); that it is not under consideration for publication elsewhere; that its publication has been approved by all coauthors, if any, as well as by the responsible authorities at the institute where the work has been carried out; that, if and when the manuscript is accepted for publication, the authors agree to automatic transfer of the copyright to the publisher and that the manuscript will not be published elsewhere in any language without the consent of the copyright holders.

All articles published in this journal are protected by copyright, which covers the exclusive rights to reproduce and distribute the article (e. g., as offprints), as well as all translation rights. No material published in this journal my be reproduced photographically or stored on microfilm, in electronic data bases, video disks, etc., without first obtaining written permission from the publisher.

The use of general descriptive names, trade names, trademarks, etc., in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations.

While the advice and information in this journal is believed to be true and accurate at the date of its going to press, neither the authors, the editors, nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Special regulations for photocopies in the USA. Photocopies may be made for personal or in-house use beyond the limitations stipulated under Section 107 or 108 of U.S. Copyright Law, provided a fee is paid. All fees should be paid to the Copyright Clearance Center, Inc., 21 Congress Street, Salem, MA 01970, USA, stating the ISSN 0012-186X, the volume, and the first and last page numbers of each article copied. The copyright owner's consent does not include copying for general distribution, promotion, new works, or resale. In these cases, specific written permission must first be obtained from the publisher.

Springer-Verlag Berlin Heidelberg New York London Paris Tokyo Hong Kong Barcelona Budapest
Printed in Germany by aprinta Wemding
© Springer-Verlag Berlin Heidelberg 1995
Springer-Verlag GmbH & Co.KG, D-14197 Berlin, Germany

Contents

Full instructions to authors

A 5, Issue No. 1; A 5, Issue No. 7

Editorial

Ferrannini, E. 1
Halban, P.: Publish and flourish: seasonal advice to our readers 1375

Review

Reaven, G. M.: The fourth Musketeer – from Alexandre Dumas to Claude Bernard 3
Yki-Järvinen, H.: Role of insulin resistance in the pathogenesis of NIDDM 1378

Originals

Aldington, S. J., E. M. Kohner, S. Meuer, R. Klein, A. K. Sjølie for the EURODIAB IDDM Complications Study Group: Methodology for retinal photography and assessment of diabetic retinopathy: the EURODIAB IDDM Complications Study 437
Andersen, H., J. F. Nielsen, P. L. Poulsen, C. E. Mogensen, J. Jakobsen: Motor pathway function in normoalbuminuric IDDM patients 1191
Andrikopoulos, S., J. Proietto: The biochemical basis of increased hepatic glucose production in a mouse model of type 2 (non-insulin-dependent) diabetes mellitus 1389
Asfari, M., W. De, M. Nöel, P. E. Holthuizen, P. Czernichow: Insulin-like growth factor-II gene expression in a rat insulin-producing beta-cell line (INS-1) is regulated by glucose 927
Beech, J. S., S. C. R. Williams, R. A. Iles, R. D. Cohen, K. M. Nolan, S. J. W. Evans, T. C. D. Going: Haemodynamic and metabolic effects in diabetic ketoacidosis in rats of treatment with sodium bicarbonate or a mixture of sodium bicarbonate and sodium carbonate 889
Beks, P. J., A. J. C. Mackaay, J. N. D. de Neeling, H. de Vries, L. M. Bouter, R. J. Heine: Peripheral arterial disease in relation to glycaemic level in an elderly Caucasian population: the Hoorn Study 86
Berrish, T. S., C. S. Hetherington, K. G. M. M. Alberti, M. Walker: Peripheral and hepatic insulin sensitivity in subjects with impaired glucose tolerance 699
Bjørn, S. F., H.-J. Bangstad, K. F. Hanssen, G. Nyberg, J. D. Walker, G. C. Viberti, R. Østerby: Glomerular epithelial foot processes and filtration slits in IDDM patients 1197
Bonifacio, E., S. Genovese, S. Braghi, E. Bazzigaluppi, V. Lampasona, P. J. Bingley, L. Rogge, M. R. Pastore, E. Bognetti, G. F. Bottazzo, E. A. M. Gale, E. Bosi: Islet autoantibody markers in IDDM: risk assessment strategies yielding high sensitivity 816
Born, J. van den, A. A. van Kraats, M. A. H. Bakker, K. J. M. Assmann, H. B. P. M. Dijkman, J. A. W. M. van der Laak, J. H. M. Berden: Reduction of heparan sulphate-associated anionic sites in the glomerular basement membrane of rats with streptozotocin-induced diabetic nephropathy 1169
Born, J. van den, A. A. van Kraats, M. A. H. Bakker, K. J. M. Assmann, L. P. W. J. van den Heuvel, J. H. Veerkamp, J. H. M. Berden: Selective proteinuria in diabetic nephropathy in the rat is associated with a relative decrease in glomerular basement membrane heparan sulphate 161

Copyright

Submission of a manuscript implies: that the work described has not been published before (except in the form of an abstract); that it is not under consideration for publication elsewhere; that its publication has been approved by all coauthors, if any, as well as by the responsible authorities at the institute where the work has been carried out; that, if and when the manuscript is accepted for publication, the authors agree to automatic transfer of the copyright to the publisher and that the manuscript will not be published elsewhere in any language without the consent of the copyright holders.

All articles published in this journal are protected by copyright, which covers the exclusive rights to reproduce and distribute the article (e. g., as offprints), as well as all translation rights. No material published in this journal my be reproduced photographically or stored on microfilm, in electronic data bases, video disks, etc., without first obtaining written permission from the publisher.

The use of general descriptive names, trade names, trademarks, etc., in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations.

While the advice and information in this journal is believed to be true and accurate at the date of its going to press, neither the authors, the editors, nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Special regulations for photocopies in the USA. Photocopies may be made for personal or in-house use beyond the limitations stipulated under Section 107 or 108 of U.S. Copyright Law, provided a fee is paid. All fees should be paid to the Copyright Clearance Center, Inc., 21 Congress Street, Salem, MA 01970, USA, stating the ISSN 0012-186X, the volume, and the first and last page numbers of each article copied. The copyright owner's consent does not include copying for general distribution, promotion, new works, or resale. In these cases, specific written permission must first be obtained from the publisher.

Springer-Verlag Berlin Heidelberg New York London Paris Tokyo Hong Kong Barcelona Budapest
Printed in Germany by aprinta Wemding
© Springer-Verlag Berlin Heidelberg 1995
Springer-Verlag GmbH & Co.KG, D-14197 Berlin, Germany

Contents

Full instructions to authors

A 5, Issue No. 1; A 5, Issue No. 7

Editorial

Ferrannini, E. 1
Halban, P.: Publish and flourish: seasonal advice to our readers 1375

Review

Reaven, G. M.: The fourth Musketeer – from Alexandre Dumas to Claude Bernard 3
Yki-Järvinen, H.: Role of insulin resistance in the pathogenesis of NIDDM 1378

Originals

Aldington, S. J., E. M. Kohner, S. Meuer, R. Klein, A. K. Sjølie for the EURODIAB IDDM Complications Study Group: Methodology for retinal photography and assessment of diabetic retinopathy: the EURODIAB IDDM Complications Study 437
Andersen, H., J. F. Nielsen, P. L. Poulsen, C. E. Mogensen, J. Jakobsen: Motor pathway function in normoalbuminuric IDDM patients 1191
Andrikopoulos, S., J. Proietto: The biochemical basis of increased hepatic glucose production in a mouse model of type 2 (non-insulin-dependent) diabetes mellitus 1389
Asfari, M., W. De, M. Nöel, P. E. Holthuizen, P. Czernichow: Insulin-like growth factor-II gene expression in a rat insulin-producing beta-cell line (INS-1) is regulated by glucose 927
Beech, J. S., S. C. R. Williams, R. A. Iles, R. D. Cohen, K. M. Nolan, S. J. W. Evans, T. C. D. Going: Haemodynamic and metabolic effects in diabetic ketoacidosis in rats of treatment with sodium bicarbonate or a mixture of sodium bicarbonate and sodium carbonate 889
Beks, P. J., A. J. C. Mackaay, J. N. D. de Neeling, H. de Vries, L. M. Bouter, R. J. Heine: Peripheral arterial disease in relation to glycaemic level in an elderly Caucasian population: the Hoorn Study 86
Berrish, T. S., C. S. Hetherington, K. G. M. M. Alberti, M. Walker: Peripheral and hepatic insulin sensitivity in subjects with impaired glucose tolerance 699
Bjørn, S. F., H.-J. Bangstad, K. F. Hanssen, G. Nyberg, J. D. Walker, G. C. Viberti, R. Østerby: Glomerular epithelial foot processes and filtration slits in IDDM patients 1197
Bonifacio, E., S. Genovese, S. Braghi, E. Bazzigaluppi, V. Lampasona, P. J. Bingley, L. Rogge, M. R. Pastore, E. Bognetti, G. F. Bottazzo, E. A. M. Gale, E. Bosi: Islet autoantibody markers in IDDM: risk assessment strategies yielding high sensitivity 816
Born, J. van den, A. A. van Kraats, M. A. H. Bakker, K. J. M. Assmann, H. B. P. M. Dijkman, J. A. W. M. van der Laak, J. H. M. Berden: Reduction of heparan sulphate-associated anionic sites in the glomerular basement membrane of rats with streptozotocin-induced diabetic nephropathy 1169
Born, J. van den, A. A. van Kraats, M. A. H. Bakker, K. J. M. Assmann, L. P. W. J. van den Heuvel, J. H. Veerkamp, J. H. M. Berden: Selective proteinuria in diabetic nephropathy in the rat is associated with a relative decrease in glomerular basement membrane heparan sulphate 161

Bottini, P., C. Tantucci, L. Scionti, M. L. Dottorini, E. Puxeddu, G. Reboldi, G. B. Bolli, G. Casucci, F. Santeusanio, C. A. Sorbini, P. Brunetti: Cardiovascular response to exercise in diabetic patients: influence of autonomic neuropathy of different severity 244

Boucher, B. J., N. Mannan, K. Noonan, C. N. Hales, S. J. W. Evans: Glucose intolerance and impairment of insulin secretion in relation to vitamin D deficiency in East London Asians 1239

Brun, J. F., C. Fédou, O. Bouix, E. Raynaud, A. Orsetti: Evaluation of a standardized hyperglucidic breakfast test in postprandial reactive hypoglycaemia 494

Burcelin, R., M. Eddouks, J. Maury, J. Kande, R. Assan, J. Girard: Excessive glucose production, rather than insulin resistance, accounts for hyperglycaemia in recent-onset streptozotocin-diabetic rats 283

Byrne, C. D., N. J. Wareham, N. E. Day, R. McLeish, D. R. R. Williams, C. N. Hales: Decreased non-esterified fatty acid suppression and features of the insulin resistance syndrome occur in a sub-group of individuals with normal glucose tolerance 1358

Chaiken, R. L., M. Eckert-Norton, R. Pasmantier, G. Boden, I. Ryan, R. A. Gelfand, H. E. Lebovitz: Metabolic effects of darglitazone, an insulin sensitizer, in NIDDM subjects 1307

Clark, S., E. Muggli, N. La Greca, M. E. Dunlop: Increased phosphorylation of focal adhesion kinase in diabetic rat kidney glomeruli 1131

Cohen, A. M., H. Wald, M. Popovtzer, E. Rosenmann: Effect of *myo*-inositol supplementation on the development of renal pathological changes in the Cohen diabetic (type 2) rat 899

Cotter, M. A., A. Love, M. J. Watt, N. E. Cameron, K. C. Dines: Effects of natural free radical scavengers on peripheral nerve and neurovascular function in diabetic rats 1285

Cummings, M. H., G. F. Watts, A. M. Umpleby, T. R. Hennessy, R. Naoumova, B. M. Slavin, G. R. Thompson, P. H. Sönksen: Increased hepatic secretion of very-low-density lipoprotein apolipoprotein B-100 in NIDDM 959

Demaine, A. G., M. L. Hibberd, D. Mangles, B. A. Millward: A new marker in the HLA class I region is associated with the age at onset of IDDM 623

Dimitriadis, E., M. Griffin, D. Owens, A. Johnson, P. Collins, G. H. Tomkin: Oxidation of low-density lipoprotein in NIDDM: its relationship to fatty acid composition 1300

Dinneen, S., A. Alzaid, D. Turk, R. Rizza: Failure of glucagon suppression contributes to postprandial hyperglycaemia in IDDM 337

Dorin, R. I., V. O. Shah, D. L. Kaplan, B. S. Vela, P. G. Zager: Regulation of aldose reductase gene expression in renal cortex and medulla of rats 46

Eidemak, I., B. Feldt-Rasmussen, I.-L. Kanstrup, S. L. Nielsen, O. Schmitz, S. Strandgaard: Insulin resistance and hyperinsulinaemia in mild to moderate progressive chronic renal failure and its association with aerobic work capacity 565

Eliasson, B., E. Björnsson, V. Urbanavicius, H. Andersson, J. Fowelin, S. Attvall, H. Abrahamsson, U. Smith: Hyperinsulinaemia impairs gastrointestinal motility and slows carbohydrate absorption 79

Esposito, L., V. Lampasona, E. Bosi, F. Poli, M. Ferrari, E. Bonifacio: HLA DQA1-DQB1-TAP2 haplotypes in IDDM families: no evidence for an additional contribution to disease risk by the TAP2 locus 968

Feskens, E. J. M., J. Tuomilehto, J. H. Stengård, J. Pekkanen, A. Nissinen, D. Kromhout: Hypertension and overweight associated with hyperinsulinaemia and glucose tolerance: a longitudinal study of the Finnish and Dutch cohorts of the Seven Countries Study 839

Forsblom, C. M., J. G. Eriksson, A. V. Ekstrand, A.-M. Teppo, M.-R. Taskinen, L. C. Groop: Insulin resistance and abnormal albumin excretion in non-diabetic first-degree relatives of patients with NIDDM 363

Garancini, M. P., G. Calori, G. Ruotolo, E. Manara, A. Izzo, E. Ebbli, A. M. Bozzetti, L. Boari, P. Lazzari, G. Gallus: Prevalence of NIDDM and impaired glucose tolerance in Italy: an OGTT-based population study 306

George, E., N. Harris, C. Bedford, I. A. Macdonald, C. A. Hardisty, S. R. Heller: Prolonged but partial impairment of the hypoglycaemic physiological response following short-term hypoglycaemia in normal subjects 1183

Giaccari, A., L. Morviducci, D. Zorretta, P. Sbraccia, F. Leonetti, S. Caiola, A. Buongiorno, R. C. Bonadonna, G. Tamburrano: In vivo effects of glucosamine on insulin secretion and insulin sensitivity in the rat: Possible relevance to the maladaptive responses to chronic hyperglycaemia 518

Giordano, C., G. Stassi, M. Todaro, R. De Maria, P. Richiusa, A. Scorsone, M. Giordano, A. Galluzzo: Low bcl-2 expression and increased spontaneous apoptosis in T-lymphocytes from newly-diagnosed IDDM patients 953

Giordano, C., R. De Maria, G. Stassi, M. Todaro, P. Richiusa, M. Giordano, R. Testi, A. Galluzzo: Defective expression of the apoptosis-inducing CD95 (Fas/APO-1) molecule on T and B cells in IDDM 1449

Giordano, M., P. Castellino, C. A. Carroll, R. A. DeFronzo: Comparison of the effects of human recombinant insulin-like growth factor I and insulin on plasma amino acid concentrations and leucine kinetics in humans 732

Goode, N. P., M. Shires, D. M. Crellin, S. R. Aparicio, A. M. Davison: Alterations of glomerular basement membrane charge and structure in diabetic nephropathy 1455

Grasso, G., L. Frittitta, M. Anello, P. Russo, G. Sesti, V. Trischitta: Insulin receptor tyrosine-kinase activity is altered in both muscle and adipose tissue from non-obese normoglycaemic insulin-resistant subjects 55

Gromada, J., S. Dissing, H. Kofod, J. Frøkjær-Jensen: Effects of the hypoglycaemic drugs repaglinide and glibenclamide on ATP-sensitive potassium-channels and cytosolic calcium levels in βTC3 cells and rat pancreatic beta cells 1025

Grønbæk, H., B. Nielsen, R. Østerby, A. Harris, H. Ørskov, A. Flyvbjerg: Effect of octreotide and insulin on manifest renal and glomerular hypertrophy and urinary albumin excretion in long-term experimental diabetes in rats 135

Gruden, G., P. Cavallo-Perin, C. Olivetti, E. Repetti, R. Sivieri, A. Bruno, G. Pagano: Albumin excretion rate levels in non-diabetic offspring of NIDDM patients with and without nephropathy 1218

Haffner, S. M., L. Mykkänen, D. Robbins, R. Valdez, H. Miettinen, B. V. Howard, M. P. Stern, R. Bowsher: A preponderance of small dense LDL is associated with specific insulin, proinsulin and the components of the insulin resistance syndrome in non-diabetic subjects 1328

Hammes, H.-P., D. Strödter, A. Weiss, R. G. Bretzel, K. Federlin, M. Brownlee: Secondary intervention with aminoguanidine retards the progression of diabetic retinopathy in the rat model 656

Hammes, H.-P., S. Syed Ali, M. Uhlmann, A. Weiss, K. Federlin, K. Geisen, M. Brownlee: Aminoguanidine does not inhibit the initial phase of experimental diabetic retinopathy in rats 269

Harper, R., C. N. Ennis, A. P. Heaney, B. Sheridan, M. Gormley, A. B. Atkinson, G. D. Johnston, P. M. Bell: A comparison of the effects of low- and conventional-dose thiazide diuretic on insulin action in hypertensive patients with NIDDM 853

Hauner, H., Th. Petruschke, M. Russ, K. Röhrig, J. Eckel: Effects of tumour necrosis factor alpha (TNFα) on glucose transport and lipid metabolism of

newly-differentiated human fat cells in cell culture 764
Hilsted, J., S. Madsbad, A. Hvidberg, M. H. Rasmussen, T. Krarup, H. Ipsen, B. Hansen, M. Pedersen, R. Djurup, B. Oxenbøll: Intranasal insulin therapy: the clinical realities 680
Hiltunen, M., H. Hyöty, J. Karjalainen, P. Leinikki, M. Knip, R. Lounamaa, H. K. Åkerblom and the Childhood Diabetes in Finland Study Group: Serological evaluation of the role of cytomegalovirus in the pathogenesis of IDDM: a prospective study 705
Hirata, K., K. Saku, S. Jimi, S. Kikuchi, H. Hamaguchi, K. Arakawa: Serum lipoprotein (a) concentrations and apolipoprotein (a) phenotypes in the families of NIDDM patients 1434
Hitman, G. A., K. Hawrami, M. I. McCarthy, M. Viswanathan, C. Snehalatha, A. Ramachandran, J. Tuomilehto, E. Tuomilehto-Wolf, A. Nissinen, O. Pedersen: Insulin receptor substrate-1 gene mutations in NIDDM; implications for the study of polygenic disease 481
Houwing, H., L. Benthem, P. T. R. Van Suylichem, J. Van der Leest, J. H. Strubbe, A. B. Steffens: Islet transplantation in diabetic rats normalizes basal and exercise-induced energy metabolism 919
Hyllienmark, L., T. Brismar, J. Ludvigsson: Subclinical nerve dysfunction in children and adolescents with IDDM 685
Ishikawa, T., Y. Naito, K. Taniguchi: Hearing impairment in WBN/Kob rats with spontaneous diabetes mellitus 649
Ito, K., H. Hirose, H. Maruyama, S. Fukamachi, Y. Tashiro, T. Saruta: Neurotransmitters partially restore glucose sensitivity of insulin and glucagon secretion from perfused streptozotocin-induced diabetic rat pancreas 1276
Itoh, N., T. Hanafusa, K. Yamagata, H. Nakajima, K. Tomita, S. Tamura, M. Inada, S. Kawata, N. Kono, M. Kuwajima, Y. Matsuzawa: No detectable cytomegalovirus and Epstein–Barr virus genomes in the pancreas of recent-onset IDDM patients 667
James, R. W., M. Boemi, C. Sirolla, L. Amadio, P. Fumelli, D. Pometta: Lipoprotein (a) and vascular disease in diabetic patients 711
Jarjour, I. T., C. M. Ryan, D. J. Becker: Regional cerebral blood flow during hypoglycaemia in children with IDDM 1090
Jeandidier, N., S. Boivin, R. Sapin, F. Rosart-Ortega, B. Uring-Lambert, Ph. Réville, M. Pinget: Immunogenicity of intraperitoneal insulin infusion using programmable implantable devices 577
Jörneskog, G., K. Brismar, B. Fagrell: Skin capillary circulation severely impaired in toes of patients with IDDM, with and without late diabetic complications 474
Kalmijn, S., E. J. M. Feskens, L. J. Launer, T. Stijnen, D. Kromhout: Glucose intolerance, hyperinsulinaemia and cognitive function in a general population of elderly men 1096
Karasu, Ç., M. Dewhurst, E. J. Stevens, D. R. Tomlinson: Effects of anti-oxidant treatment on sciatic nerve dysfunction in streptozotocin-diabetic rats; comparison with essential fatty acids 129
Kawai, K., C. Yokota, S. Ohashi, Y. Watanabe, K. Yamashita: Evidence that glucagon stimulates insulin secretion through its own receptor in rats 274
Keavney, B. D., C. R. K. Dudley, I. M. Stratton, R. R. Holman, D. R. Matthews, P. J. Ratcliffe, R. C. Turner: UK Prospective Diabetes Study (UKPDS) 14: association of angiotensin-converting enzyme insertion/deletion polymorphism with myocardial infarction in NIDDM 948
Kihara, M., J. D. Schmelzer, P. A. Low: Effect of cilostazol on experimental diabetic neuropathy in the rat 914
Kimmerle, R., R.-P. Zaß, S. Cupisti, T. Somville, R. Bender, B. Pawlowski, M. Berger: Pregnancies in women with diabetic nephropathy: long-term outcome for mother and child 227
Kisanuki, K., H. Kishikawa, E. Araki, T. Shirotani, M. Uehara, S. Isami, S. Ura, H. Jinnouchi, N. Miyamura, M. Shichiri: Expression of insulin receptor on clonal pancreatic alpha cells and its possible role for insulin-stimulated negative regulation of glucagon secretion 422
Kishimoto, M., M. Hashiramoto, S. Araki, Y. Ishida, T. Kazumi, F. Kanda, M. Kasuga: Diabetes mellitus carrying a mutation in the mitochondrial $tRNA^{Leu(UUR)}$ gene 193
Knudsen, P., J. Eriksson, S. Lahdenperä, J. Kahri, L. Groop, M.-R. Taskinen and the Botnia Study Group: Changes of lipolytic enzymes cluster with insulin resistance syndrome 344
Kotzke, G., M. Schütt, U. Missler, D. E. Moller, H. L. Fehm, H. H. Klein: Binding of human, porcine and bovine insulin to insulin receptors from human brain, muscle and adipocytes and to expressed recombinant alternatively spliced insulin receptor isoforms 757
Kozka, I. J., A. E. Clark, J. P. D. Reckless, S. W. Cushman, G. W. Gould, G. D. Holman: The effects of insulin on the level and activity of the GLUT4 present in human adipose cells 661
Laakso, M., M. Malkki, P. Kekäläinen, J. Kuusisto, S. S. Deeb: Polymorphisms of the human hexokinase II gene: lack of association with NIDDM and insulin resistance 617
Laakso, M., T. Rönnemaa, S. Lehto, P. Puukka, V. Kallio, K. Pyörälä: Does NIDDM increase the risk for coronary heart disease similarly in both low- and high-risk populations? 487
Lam, K. S. L., I. K. P. Cheng, E. D. Janus, R. W. C. Pang: Cholesterol-lowering therapy may retard the progression of diabetic nephropathy 604
Lampeter, E. F., M. Tubes, C. Klemens, U. Brocker, J. Friemann, V. Kolb-Bachofen, F. A. Gries, H. Kolb: Insulitis and islet-cell antibody formation in rats with experimentally reduced beta-cell mass 1397
Landau, B. R., V. Chandramouli, W. C. Schumann, K. Ekberg, K. Kumaran, S. C. Kalhan, J. Wahren: Estimates of Krebs cycle activity and contributions of gluconeogenesis to hepatic glucose production in fasting healthy subjects and IDDM patients 831
Lapolla, A., D. Fedele, R. Seraglia, S. Catinella, L. Baldo, R. Aronica, P. Traldi: A new effective method for the evaluation of glycated intact plasma proteins in diabetic subjects 1076
Lehmann, R., A. Vokac, K. Niedermann, K. Agosti, G. A. Spinas: Loss of abdominal fat and improvement of the cardiovascular risk profile by regular moderate exercise training in patients with NIDDM 1313
Lehto, M., X. Huang, E. M. Davis, M. M. Le Beau, E. Laurila, K. F. Eriksson, G. I. Bell, L. Groop: Human hexokinase II gene: exon-intron organization, mutation screening in NIDDM, and its relationship to muscle hexokinase activity 1466
Leow, C. K., D. W. R. Gray, P. J. Morris: The long-term metabolic function of intraportal and renal subcapsular islet isografts and the effect on glomerular basement membrane thickness in rats 1014
Lévy-Marchal, C., C. Patterson, A. Green on behalf of the EURODIAB ACE Study Group: Variation by age group and seasonality at diagnosis of childhood IDDM in Europe 823
Li, X.-B., F. W. Scott, Y. H. Park, J.-W. Yoon: Low incidence of autoimmune type I diabetes in BB rats fed a hydrolysed casein-based diet associated with early inhibition of non-macrophage-dependent hyperexpression of MHC class I molecules on beta cells 1138
MacKay, P.: Adoptive transfer of diabetes to and from old normoglycaemic BB rats 145
MacLeod, J. M., J. Lutale, S. M. Marshall: Albumin excretion and vascular deaths in NIDDM 610

Madsen, K. L., D. Ariano, R. N. Fedorak: Vanadate treatment rapidly improves glucose transport and activates 6-phosphofructo-1-kinase in diabetic rat intestine 403

Mahadevan, P., R. G. Larkins, J. R. E. Fraser, A. J. Fosang, M. E. Dunlop: Increased hyaluronan production in the glomeruli from diabetic rats: a link between glucose-induced prostaglandin production and reduced sulphated proteoglycan 298

Maran, A., J. Lomas, I. A. Macdonald, S. A. Amiel: Lack of preservation of higher brain function during hypoglycaemia in patients with intensively-treated IDDM 1412

Martin, S., J. Kardorf, B. Schulte, E. F. Lampeter, F. A. Gries, I. Melchers, R. Wagner, J. Bertrams, B. O. Roep, A. Pfützner, M. Pietropaolo, H. Kolb: Autoantibodies to the islet antigen ICA 69 occur in IDDM and in rheumatoid arthritis 351

Masuda, K., Y. Okamoto, Y. Tsuura, S. Kato, T. Miura, K. Tsuda, H. Horikoshi, H. Ishida, Y. Seino: Effects of Troglitazone (CS-045) on insulin secretion in isolated rat pancreatic islets and HIT cells: an insulinotropic mechanism distinct from glibenclamide 24

Matsushima, M., N. Tajima, R. E. LaPorte, T. J. Orchard, E. S. Tull, L. F. Gower, T. Kitagawa for the Diabetes Epidemiology Research International (DERI) U. S.-Japan Mortality Study Group: Markedly increased renal disease mortality and incidence of renal replacement therapy among IDDM patients in Japan in contrast to Allegheny County, Pennsylvania, USA 236

McCance, D. R., R. L. Hanson, D. J. Pettitt, L. T. H. Jacobsson, P. H. Bennett, D. T. Bishop, W. C. Knowler: Diabetic nephropathy: a risk factor for diabetes mellitus in offspring 221

McLellan, J. A. S., B. A. Barrow, J. C. Levy, M. S. Hammersley, A. T. Hattersley, M. D. G. Gillmer, R. C. Turner: Prevalence of diabetes mellitus and impaired glucose tolerance in parents of women with gestational diabetes 693

McNally, P. G., I. G. Lawrence, P. A. C. Watt, C. Hillier, A. C. Burden, H. Thurston: The effect of insulin on the vascular reactivity of isolated resistance arteries taken from healthy volunteers 467

Metcalfe, K. A., G. A. Hitman, M. J. Fennessy, M. I. McCarthy, J. Tuomilehto, E. Tuomilehto-Wolf, The DiMe (Childhood Diabetes in Finland) Study Group: In Finland insulin gene region encoded susceptibility to IDDM exerts maximum effect when there is low HLA-DR associated risk 1223

Mitchell, B. D., C. M. Kammerer, L. J. Reinhart, M. P. Stern, J. W. MacCluer: Is there an excess in maternal transmission of NIDDM? 314

Mohamed-Ali, V., M. M. Gould, S. Gillies, S. Goubet, J. S. Yudkin, A. P. Haines: Association of proinsulin-like molecules with lipids and fibrinogen in non-diabetic subjects – evidence against a modulating role for insulin 1110

Monti, L. D., P. Brambilla, I. Stefani, A. Caumo, F. Magni, R. Poma, L. Tomasini, G. Agostini, M. Galli-Kienle, C. Cobelli, G. Chiumello, G. Pozza: Insulin regulation of glucose turnover and lipid levels in obese children with fasting normoinsulinaemia 739

Moody, A. J., K. R. Hejnæs, M. O. Marshall, F. S. Larsen, E. Boel, I. Svendsen, E. Mortensen, T. Dyrberg: Isolation by anion-exchange of immunologically and enzymatically active human islet glutamic acid decarboxylase 65 overexpressed in Sf9 insect cells 14

Moreo, G., E. Mariani, G. Pizzamiglio, G. B. Colucci: Visual evoked potentials in NIDDM: a longitudinal study 573

Morris, S. J., A. C. Shore, J. E. Tooke: Responses of the skin microcirculation to acetylcholine and sodium nitroprusside in patients with NIDDM 1337

Muggeo, M., G. Verlato, E. Bonora, F. Bressan, S. Girotto, M. Corbellini, M. L. Gemma, P. Moghetti, M. Zenere, V. Cacciatori, G. Zoppini, R. De Marco: The Verona diabetes study: a population-based survey on known diabetes mellitus prevalence and 5-year all-cause mortality 318

Muggeo, M., G. Verlato, E. Bonora, F. Ciani, P. Moghetti, R. Eastman, G. Crepaldi, R. de Marco: Long-term instability of fasting plasma glucose predicts mortality in elderly NIDDM patients: the Verona Diabetes Study 672

Mulder, H., B. Ahrén, M. Stridsberg, F. Sundler: Non-parallelism of islet amyloid polypeptide (amylin) and insulin gene expression in rat islets following dexamethasone treatment 395

Mulec, H., G. Blohmé, K. Kullenberg, G. Nyberg, S. Björck: Latent overhydration and nocturnal hypertension in diabetic nephropathy 216

Muñoz, A., T. Gallart, E. F. Usac, J. Fernández-Alvarez, O. Viñas, N. Somoza, J. Barceló, R. Gomis: Anti-islet cell and anti-insulin antibody production by CD5 + and CD5– B lymphocytes in IDDM 62

Mykkänen, L., S. M. Haffner, J. Kuusisto, K. Pyörälä, C. N. Hales, M. Laakso: Serum proinsulin levels are disproportionately increased in elderly prediabetic subjects 1176

Myrup, B., P. Rossing, T. Jensen, J. Gram, C. Kluft, J. Jespersen: Procoagulant activity and intimal dysfunction in IDDM 73

Nagi, D. K., W. C. Knowler, M. A. Charles, Q. Z. Liu, R. L. Hanson, D. R. McCance, D. J. Pettitt, P. H. Bennett: Early and late insulin response as predictors of NIDDM in Pima Indians with impaired glucose tolerance 187

Nakagawa, A., J. I. Stagner, E. Samols: In situ binding of islet hormones in the isolated perfused rat pancreas: evidence for local high concentrations of islet hormones via the islet-acinar axis 262

Nielsen, F. S., L. N. Jørgensen, M. Ipsen, A. I. Voldsgaard, H.-H. Parving: Long-term comparison of human insulin analogue B10Asp and soluble human insulin in IDDM patients on a basal/bolus insulin regimen 592

Nielsen, S., K. Hermansen, O. W. Rasmussen, C. Thomsen, C. E. Mogensen: Urinary albumin excretion rate and 24-h ambulatory blood pressure in NIDDM with microalbuminuria: effects of a monounsaturated-enriched diet 1069

Ohneda, M., L. R. Inman, R. H. Unger: Caloric restriction in obese pre-diabetic rats prevents beta-cell depletion, loss of beta-cell GLUT 2 and glucose incompetence 173

Okamoto, Y., H. Ishida, Y. Tsuura, K. Yasuda, S. Kato, H. Matsubara, M. Nishimura, N. Mizuno, H. Ikeda, Y. Seino: Hyperresponse in calcium-induced insulin release from electrically permeabilized pancreatic islets of diabetic GK rats and its defective augmentation by glucose 772

Ongagna, J.-C., C. Levy-Marchal: Anti-37kDa antibodies are associated with the development of IDDM in individuals with islet cell antibodies 370

Osei, K., D. P. Schuster: Metabolic characteristics of African descendants: a comparative study of African-Americans and Ghanaian immigrants using minimal model analysis 1103

Østerby, R., H.-J. Bangstad, G. Nyberg, J. D. Walker, G. C. Viberti: A quantitative ultrastructural study of juxtaglomerular arterioles in IDDM patients with micro- and normoalbuminuria 1320

Ozanne, S. E., P. C. Guest, J. C. Hutton, C. N. Hales: Intracellular localization and molecular heterogeneity of the sulphonylurea receptor in insulin-secreting cells 277

Paillole, C., J. Ruiz, J. M. Juliard, H. Leblanc, R. Gourgon, Ph. Passa: Detection of coronary artery disease in diabetic patients 726

Paolisso, G., A. Gambardella, L. Amato, R. Tortoriello, A. D'Amore, M. Varric-

chio, F. D'Onofrio: Opposite effects of short- and long-term fatty acid infusion on insulin secretion in healthy subjects 1295

Paolisso, G., P. A. Tataranni, J. E. Foley, C. Bogardus, B. V. Howard, E. Ravussin: A high concentration of fasting plasma non-esterified fatty acids is a risk factor for the development of NIDDM 1213

Patti, L., L. Di Marino, A. Maffettone, G. Romano, G. Annuzzi, G. Riccardi, A. A. Rivellese: Very low density lipoprotein subfraction abnormalities in IDDM patients: any effect of blood glucose control? 1419

Pinkney, J. H., W.-J. Foyle, A. E. Denver, V. Mohamed-Ali, S. McKinlay, J. S. Yudkin: The relationship of urinary albumin excretion rate to ambulatory blood pressure and erythrocyte sodium-lithium countertransport in NIDDM 356

Polychronakos, C., A. Kukuvitis, N. Giannoukakis, E. Colle: Parental imprinting effect at the *INS-IGF2* diabetes susceptibility locus 715

Pozzilli, P., N. Visalli, A. Signore, M. G. Baroni, R. Buzzetti, M. G. Cavallo, M. L. Boccuni, D. Fava, C. Gragnoli, D. Andreani, L. Lucentini, M. C. Matteoli, A. Crinò, C. A. Cicconetti, C. Teodonio, F. Paci, R. Amoretti, L. Pisano, M. G. Pennafina, G. Santopadre, G. Marozzi, G. Multari, M. A. Suppa, L. Campea, G. C. De Mattia, M. Cassone Faldetta, G. Marietti, F. Perrone, A. V. Greco, G. Ghirlanda: Double blind trial of nicotinamide in recent-onset IDDM (the IMDIAB III study) 848

Prochazka, M., H. Mochizuki, L. J. Baier, P. T. W. Cohen, C. Bogardus: Molecular and linkage analysis of type-1 protein phosphatase catalytic beta-sub-unit gene: lack of evidence for its major role in insulin resistance in Pima Indians 461

Rabuazzo, A. M., M. Buscema, V. Caltabiano, M. Anello, C. Degano, G. Patanè, R. Vigneri, F. Purrello: Interleukin-1β inhibition of insulin release in rat pancreatic islets: possible involvement of G-proteins in the signal transduction pathway 779

Rafaeloff, R., S. W. Barlow, L. Rosenberg, A. I. Vinik: Expression of *Reg* gene in the Syrian golden hamster pancreatic islet regeneration model 906

Raitakari, O. T., K. V. K. Porkka, T. Rönnemaa, M. Knip, M. Uhari, H. K. Åkerblom, J. S. A. Viikari: The role of insulin in clustering of serum lipids and blood pressure in children and adolescents. The Cardiovascular Risk in Young Finns Study 1042

Rasch, R., O. Torffvit, S. Bachmann, P. K. Jensen, N. O. Jacobsen: Tamm-Horsfall glycoprotein in streptozotocin diabetic rats: a study of kidney in situ hybridization, immunohistochemistry, and urinary excretion 525

Ricort, J.-M., J.-F. Tanti, E. Van Obberghen, Y. Le Marchand-Brustel: Alterations in insulin signalling pathway induced by prolonged insulin treatment of 3T3-L1 adipocytes 1148

Ritzel, R., C. Ørskov, J. J. Holst, M. A. Nauck: Pharmacokinetic, insulinotropic, and glucagonostatic properties of GLP-1 [7–36 amide] after subcutaneous injection in healthy volunteers. Dose-response-relationships 720

Roglić, G., I. Pavlić-Renar, S. Šestan-Crnek, M. Prašek, M. Kadrnka-Lovrenčić, A. Radica, Ž. Metelko: Incidence of IDDM during 1988–1992 in Zagreb, Croatia 550

Roques, M., G. Crémel, D. Aunis, P. Hubert: Biological effects of encapsulated insulin on transfected Chinese Hamster ovary cells 180

Rösen, P., T. Ballhausen, W. Bloch, K. Addicks: Endothelial relaxation is disturbed by oxidative stress in the diabetic rat heart: influence of tocopherol as antioxidant 1157

Rösen, R., A. F. E. Rump, P. Rösen: The ACE-inhibitor captopril improves myocardial perfusion in spontaneously diabetic (BB) rats 509

Routsias, J., G. K. Papadopoulos: Polymorphic structural features of modelled HLA-DQ molecules segregate according to susceptibility or resistance to IDDM 1251

Rydén Ahlgren, Å., T. Länne, P. Wollmer, B. Sonesson, F. Hansen, G. Sundkvist: Increased arterial stiffness in women, but not in men, with IDDM 1082

Sakamoto, K., R. Kikkawa, M. Haneda, Y. Shigeta: Prevention of glomerular hyperfiltration in rats with streptozotocin-induced diabetes by an atrial natriuretic peptide receptor antagonist 536

Sampson, M. J., E. Denver, W. J. Foyle, D. Dawson, J. Pinkney, J. S. Yudkin: Association between left ventricular hypertrophy and erythrocyte sodium-lithium exchange in normotensive subjects with and without NIDDM 454

Sato, T., Y. Asahi, K. Toide, N. Nakayama: Insulin resistance in skeletal muscle of the male Otsuka Long-Evans Tokushima Fatty rat, a new model of NIDDM 1033

Schnell, O., C.-M. Kirsch, J. Stemplinger, M. Haslbeck, E. Standl: Scintigraphic evidence for cardiac sympathetic dysinnervation in long-term IDDM patients with and without ECG-based autonomic neuropathy 1345

Sesti, G., R. D'Alfonso, M. D. Vargas Punti, L. Frittitta, V. Trischitta, Y. Y. Liu, P. Borboni, R. Longhi, A. Montemurro, R. Lauro: Peptide-based radioimmunoassay for the two isoforms of the human insulin receptor 445

Shimada, F., H. Makino, H. Iwaoka, S. Miyamoto, N. Hashimoto, A. Kanatsuka, G. I. Bell, S. Yoshida: Identification of two novel amino acid polymorphisms in beta-cell/liver (GLUT2) glucose transporter in Japanese subjects 211

Shojaee-Moradie, F., N. C. Jackson, M. Boroujerdi, D. Brandenburg, P. H. Sönksen, R. H. Jones: Demonstration of a relatively hepatoselective effect of covalent insulin dimers on glucose metabolism in dogs 1007

Simell, T., J. Mäenpää, E. A. Kaprio, A. Hakulinen, J. Hakalax, I. Sipilä, H. K. Åkerblom, O. Simell: Serum insulin profiles in consecutive children 2 years after the diagnosis of IDDM 97

Sivan, E., B. Feldman, M. Dolitzki, N. Nevo, N. Dekel, A. Karasik: Glyburide crosses the placenta in vivo in pregnant rats 753

Soulis-Liparota, T., M. E. Cooper, M. Dunlop, G. Jerums: The relative roles of advanced glycation, oxidation and aldose reductase inhibition in the development of experimental diabetic nephropathy in the Sprague-Dawley rat 387

Spiro, M. J., Q. He, M. L. D'Autilia: Effect of high glucose on formation of extracellular matrix components by cultured rat heart endothelial cells 430

Stegmayr, B., K. Asplund: Diabetes as a risk factor for stroke. A population perspective 1061

Stephenson, J. M., J. H. Fuller, G.-C. Viberti, A.-K. Sjolie, R Navalesi, the EURODIAB IDDM Complications Study Group: Blood pressure, retinopathy and urinary albumin excretion in IDDM: the EURODIAB IDDM Complications Study 599

Stitt, A. W., U. Chakravarthy, D. B. Archer, T. A. Gardiner: Increased endocytosis in retinal vascular endothelial cells grown in high glucose medium is modulated by inhibitors of nonenzymatic glycosylation 1271

Strojek, K., W. Grzeszczak, B. Lacka, J. Gorska, C. K. Keller, E. Ritz: Increased prevalence of salt sensitivity of blood pressure in IDDM with and without microalbuminuria 1443

Suárez, A., N. Pulido, A. Casla, B. Casanova, F. J. Arrieta, A. Rovira: Impaired tyrosine-kinase activity of muscle insulin receptors from hypomagnesaemic rats 1262

Tanaka, M., R. Katashima, D. Murakami, K. Adzuma, Y. Takahashi, A. Tomonari, H. Iwahana, K. Yoshimoto,

M. Itakura: Molecular cloning of a group of mouse pancreatic islet beta-cell-related genes by random cDNA sequencing 381
Tao, T., Y. Tanizawa, A. Matsutani, A. Matsubara, T. Kaneko, K. Kaku: HepG2/erythrocyte glucose transporter (GLUT1) gene in NIDDM: a population association study and molecular scanning in Japanese subjects 942
Tarnow, L., F. Cambien, P. Rossing, F. S. Nielsen, B. V. Hansen, L. Lecerf, O. Poirier, S. Danilov, S. Boelskifte, K. Borch-Johnsen, H.-H. Parving: Insertion/deletion polymorphism in the angiotensin-I-converting enzyme gene is associated with coronary heart disease in IDDM patients with diabetic nephropathy 798
Taylor, D. J., C. H. Thompson, G. J. Kemp, P. R. J. Barnes, A. L. Sanderson, G. K. Radda, D. I. W. Phillips: A relationship between impaired fetal growth and reduced muscle glycolysis revealed by ^{31}P magnetic resonance spectroscopy 1205
Tobin, B. W., M. J. Marchello: Islet transplantation reverses carcass protein loss in diabetic rats without inducing disproportionate fat accumulation 881
Trovati, M., P. Massucco, L. Mattiello, F. Cavalot, E. Mularoni, A. Hahn, G. Anfossi: Insulin increases cyclic nucleotide content in human vascular smooth muscle cells: a mechanism potentially involved in insulin-induced modulation of vascular tone 936
Tuomilehto, J., T. Podar, E. Tuomilehto-Wolf, E. Virtala: Evidence for importance of gender and birth cohort for risk of IDDM in offspring of IDDM parents 975
Tuominen, J. A., S.-L. Karonen, L. Melamies, G. Bolli, V. A. Koivisto: Exercise-induced hypoglycaemia in IDDM patients treated with a short-acting insulin analogue 106
Uccioli, L., V. Parisi, G. Monticone, L. Parisi, L. Durola, C. Pernini, R. Neuschuler, M. G. Bucci, G. Menzinger: Electrophysiological assessment of visual function in newly-diagnosed IDDM patients 804
Ueda, H., H. Ikegami, E. Yamato, J. Fu, M. Fukuda, G. Shen, Y. Kawaguchi, K. Takekawa, Y. Fujioka, T. Fujisawa, Y. Nakagawa, Y. Hamada, M. Shibata, T. Ogihara: The NSY mouse: a new animal model of spontaneous NIDDM with moderate obesity 503
Utriainen, T., R. Malmström, S. Mäkimattila, H. Yki-Järvinen: Methodological aspects, dose-response characteristics and causes of interindividual variation in insulin stimulation of limb blood flow in normal subjects 555
Vaag, A., F. Alford, F. L. Henriksen, M. Christopher, H. Beck-Nielsen: Multiple defects of both hepatic and peripheral intracellular glucose processing contribute to the hyperglycaemia of NIDDM 326
Velasquez, M. T., A. A. Abraham, P. L. Kimmel, T. Farkas-Szallasi, O. E. Michaelis IV: Diabetic glomerulopathy in the SHR/N-corpulent rat: role of dietary carbohydrate in a model of NIDDM 31
Vestergaard, H., S. Lund, C. Bjørbæk, O. Pedersen: Unchanged gene expression of glycogen synthase in muscle from patients with NIDDM following sulphonylurea-induced improvement of glycaemic control 1230
Vinci, C., V. Caltabiano, A. M. Santoro, A. M. Rabuazzo, M. Buscema, R. Purrello, E. Rizzarelli, R. Vigneri, F. Purrello: Copper addition prevents the inhibitory effects of interleukin 1-β on rat pancreatic islets 39
Wakisaka, M., Q. He, M. J. Spiro, R. G. Spiro: Glucose entry into rat mesangial cells is mediated by both Na^+-coupled and facilitative transporters 291
Wang, R. N., G. Klöppel, L. Bouwens: Duct- to islet-cell differentiation and islet growth in the pancreas of duct-ligated adult rats 1405
Warley, A., J. M. Powell, J. N. Skepper: Capillary surface area is reduced and tissue thickness from capillaries to myocytes is increased in the left ventricle of streptozotocin-diabetic rats 413
Wasada, T., H. Kuroki, M. Naruse, H. Arii, A. Maruyama, K. Katsumori, S. Saito, Y. Watanabe, K. Naruse, H. Demura, Y. Omori: Insulin resistance is associated with high plasma ouabain-like immunoreactivity concentration in NIDDM 792
Welsh, M., N. Welsh, K. Bendtzen, J. Mares, E. Strandell, C. Öberg, S. Sandler: Comparison of mRNA contents of interleukin-1β and nitric oxide synthase in pancreatic islets isolated from female and male nonobese diabetic mice 153
Westermark, P., D. L. Eizirik, D. G. Pipeleers, C. Hellerström, A. Andersson: Rapid deposition of amyloid in human islets transplanted into nude mice 543
Yamaoka, T., C. Nishimura, K. Yamashita, M. Itakura, T. Yamada, J. Fujimoto, Y. Kokai: Acute onset of diabetic pathological changes in transgenic mice with human aldose reductase cDNA 255
Yamasaki, Y., R. Kawamori, H. Matsushima, H. Nishizawa, M. Kodama, M. Kubota, Y. Kajimoto, T. Kamada: Asymptomatic hyperglycaemia is associated with increased intimal plus medial thickness of the carotid artery 585
Yanagisawa, K., Y. Uchigata, M. Sanaka, H. Sakura, S. Minei, M. Shimizu, R. Kanamuro, T. Kadowaki, Y. Omori: Mutation in the mitochondrial $tRNA^{leu}$ at position 3243 and spontaneous abortions in Japanese women attending a clinic for diabetic pregnancies 809
Yoshida, K., J. Hirokawa, S. Tagami, Y. Kawakami, Y. Urata, T. Kondo: Weakened cellular scavenging activity against oxidative stress in diabetes mellitus: regulation of glutathione synthesis and efflux 201
Young, A. A., B. Gedulin, W. Vine, A. Percy, T. J. Rink: Gastric emptying is accelerated in diabetic BB rats and is slowed by subcutaneous injections of amylin 642
Young, M. J., A. Veves, J. V. Smith, M. G. Walker, A. J. M. Boulton: Restoring lower limb blood flow improves conduction velocity in diabetic patients 1051
Yu, L., H. P. Chase, A. Falorni, M. Rewers, Å. Lernmark, G. S. Eisenbarth: Sexual dimorphism in transmission of expression of islet autoantibodies to offspring 1353
Zerbini, G., T. Roth, F. Podestá, E. Cagliero, A. Doria, M. Canessa, M. Lorenzi: Activity and expression of the Na^+/H^+ exchanger in human endothelial cells cultured in high glucose 785
Zhang, H., K. Öllinger, U. Brunk: Insulinoma cells in culture show pronounced sensitivity to alloxan-induced oxidative stress 635
Zhang, Y., M. Warren-Perry, P. J. Saker, A. T. Hattersley, A. D. R. Mackie, J. D. Baird, R. H. Greenwood, M. Stoffel, G. I. Bell, R. C. Turner: Candidate gene studies in pedigrees with maturity-onset diabetes of the young not linked with glucokinase 1055
Ziegler, D., M. Hanefeld, K. J. Ruhnau, H. P. Meißner, M. Lobisch, K. Schütte, F. A. Gries, The ALADIN Study Group: Treatment of symptomatic diabetic peripheral neuropathy with the anti-oxidant α-lipoic acid. A 3-week multicentre randomized controlled trial (ALADIN Study) 1425

Rapid communications

Baumgartner-Parzer, S. M., L. Wagner, M. Pettermann, A. Gessl, W. Waldhäusl: Modulation by high glucose of adhesion molecule expression in cultured endothelial cells 1367
Cominacini, L., A. Fratta Pasini, U. Garbin, A. Davoli, A. De Santis, M. Campagnola, A. Rigoni, M. G. Zenti, P. Moghetti, V. Lo Cascio: Elevated levels of

soluble E-selectin in patients with IDDM and NIDDM: relation to metabolic control 1122
Dahlquist, G., G. Frisk, S. A. Ivarsson, L. Svanberg, M. Forsgren, H. Diderholm: Indications that maternal coxsackie B virus infection during pregnancy is a risk factor for childhood-onset IDDM 1371
Dotta, F., M. Previti, L. Lenti, S. Dionisi, B. Casetta, M. D'Erme, G. S. Eisenbarth, U. Di Mario: GM2-1 pancreatic islet ganglioside: identification and characterization of a novel islet-specific molecule 1117
Fujisawa, T., H. Ikegami, E. Yamato, K. Takekawa, Y. Nakagawa, Y. Hamada, H. Ueda, M. Fukuda, T. Ogihara: A mutation in the glucagon receptor gene (Gly40Ser): heterogeneity in the association with diabetes mellitus 983
Fürnsinn, C., K. Ebner, W. Waldhäusl: Failure of GLP-1(7–36)amide to affect glycogenesis in rat skeletal muscle 864
Huang, X., M. Orho, M. Lehto, L. Groop: Lack of association between the Gly40Ser polymorphism in the glucagon receptor gene and NIDDM in Finland 1246
Keegan, A., H. Walbank, M. A. Cotter, N. E. Cameron: Chronic vitamin E treatment prevents defective endothelium-dependent relaxation in diabetic rat aorta 1475
Leibiger, B., I. B. Leibiger: Functional analysis of DNA-elements involved in transcriptional control of the human glucose transporter 2 (GLUT 2) gene in the insulin-producing cell line βTC-3 112
Martín, F., F. Moya, L. M. Gutierrez, J. A. Reig, B. Soria: Role of syntaxin in mouse pancreatic beta cells 860
Poulton, J., S. O'Rahilly, K. J. Morten, A. Clark: Mitochondrial DNA, diabetes and pancreatic pathology in Kearns–Sayre syndrome 868
Stirling, B., N. J. Cox, G. I. Bell, C. L. Hanis, R. S. Spielman, P. Concannon: Linkage studies in NIDDM with markers near the sulphonylurea receptor gene 1479

For debate

Boucher, B. J.: Strategies for reduction in the prevalence of NIDDM; the case for a population-based approach to the development of policies to deal with environmental factors in its aetiology 1125
Cerasi, E.: Insulin deficiency and insulin resistance in the pathogenesis of NIDDM: is a divorce possible? 992
Jeanrenaud, B.: Insulin, corticosterone and the autonomic nervous system in animal obesities: a viewpoint 998
Smits, P., T. Thien: Cardiovascular effects of sulphonylurea derivatives. Implications for the treatment of NIDDM? 116
Zawalich, W. S., G. G. Kelley: The pathogenesis of NIDDM: the role of the pancreatic beta cell 986

Letters to the editors

Alcolado, R., J. Gagg, A. W. Thomas, E. J. Sherratt, J. C. Alcolado: Testing parents of NIDDM patients 1482
Arner, P.: Response from the authors 128
Arslanoğlu, İ., H. Günöz, R. Bundak, N. Saka: Hypomagnesaemia in childhood IDDM and risk of nephropathy 629
Awata, T., R. Hagura, T. Urakami, Y. Kanazawa: Age-dependent HLA genetic heterogeneity of IDDM in Japanese patients 748
Bergström, B., P. Manhem, M. Bramnert, B. Lilja, G. Sundkvist: Blunted epinephrine response following exercise in autonomic neuropathy 1003
Biessels, G. J., B. Bravenboer, W. H. Gispen: Response from the authors 251
Blanché, H., N. Cohen, P. Froguel: Response from the authors 378
Bonifacio, E.: HLA-A associations with IDDM – a case of numbers? 751
Bottini, P.: Response from the author 1003
Breimer, L.: Plasma fibrinogen as cardiovascular risk factor 630
Ceriello, A., M. Pirisi: Is oxidative stress the missing link between insulin resistance and atherosclerosis? 1484
Chaturvedi, N., P. M. McKeigue, M. G. Marmot: Response from the authors 630
Chuang, L.-M., K. C. Chiu, H.-P. Wu, T.-S. Jou, T.-Y. Tai, B. J. Lin: Exclusion of adenosine deaminase gene locus on chromosome 20q12-13.1 in familial NIDDM in Taiwanese patients 1490
Dahlquist, G., L. Gothefors: The cumulative incidence of childhood diabetes mellitus in Sweden unaffected by BCG-vaccination 874
Demaine, A., M. Hibberd, A. Millward: Insertion/deletion polymorphism in the angiotensine-I-converting enzyme gene 1495
Després, J.-P., S. Lemieux: Reply from the authors 631
Dey, J., A. Misra, N. G. Desai, A. K. Mohapatra, M. V. Padma: Cerebral function in a relatively young subset of NIDDM patients 251
Elliott, R. B., C. C. Pilcher: Epstein-Barr virus infection is not associated with islet cell and insulin auto-antibody seroconversion 1130
Elving, L. D., J. F. M. Wetzels, H. J. J. van Lier, E. de Nobel, J. H. M. Berden: Response from the authors 124
Fennessy, M., K. Metcalfe, G. A. Hitman, P. A. Biro, J. Tuomilehto, E. Tuomilehto-Wolf: Response from the authors 752
Fujisawa, T., H. Ikegami, Y. Kawaguchi, E. Yamato, K. Takekawa, Y. Nakagawa, Y. Hamada, H. Ueda, K. Shima, T. Ogihara: Class I HLA is associated with age-at-onset of IDDM, while class II HLA confers susceptibility to IDDM 1494
Gilon, P., J. C. Jonas, J. C. Henquin: Response from the authors 879
Hales, C. N.: Use of terminology related to fetal insulin secretion 124
Hamada, Y., H. Ikegami, Y. Fujioka, E. Yamato, K. Takekawa, T. Fujisawa, Y. Nakagawa, H. Ueda, J. Fu, G.-Q. Shen, T. Mild, T. Ogihara: The glycogen synthase gene in NIDDM and hypertension 1249
Hardy, K. J.: Antihypertensives retarding progression of diabetic nephropathy 124
Hashiramoto, M., M. Kishimoto, M. Kasuga: Response from the authors 1489
Jenkins, D., C. Mijovic: HLA-A alleles and susceptibility to IDDM 750
Kotanko, P., O. Höglinger, A. Binder, F. Skrabal: Further evidence for reduced $beta_2$-adrenoceptor expression and modification of its density at a level beyond gene expression 126
Ledermann, H. M.: Maturity-onset diabetes of the young (MODY) at least ten times more common in Europe than previously assumed? 1482
MacDonald, M. J.: Is liver type pyruvate kinase present in the normal pancreatic islet? 125
McCance, D. R., R. L. Hanson, D. J. Pettitt, L. T. H. Jacobsson, P. H. Bennett, D. T. Bishop, W. C. Knowler: Response from the authors 1487
Mersiyanova, I. V., V. L. Osakovsky, Yu. A. Knyazev, O. V. Evgrafov: High frequency of HLA DQA1*0301 in Yakuts: no correlation with IDDM incidence 749
Mikhailidis, D. P., C. S. Thompson: Disordered gastric motor function in diabetes mellitus 632
Mitchell, B. D., C. M. Kammerer, L. J. Reinhart, M. P. Stern, J. W. MacCluer: Response from the authors 1483
Morales, J., M. Puig-Domingo, D. Mauricio, A. De Leiva: Assignment of islet cell antibody titres and selection of subjects for IDDM prevention trials 633
Norazmi, M. N., M. Peakman, D. Vergani, H. Baum: Shared amino acid sequences between glutamic acid decarboxylase 65 and 67 and alpha-2-macroglo-

bulin. A focus for cross-reactive autoantibodies? 875
Odawara, M., K. Sasaki, Y. Tachi, K. Yamashita: Selection of primers for detection of A to G mutation at nucleotide 3243 of the mitochondrial gene 377
Odawara, M., K. Tada, K. Yamashita: Decreased cerebral blood perfusion in an NIDDM patient with an A-to-G mutation in the mitochondrial gene; a possible contribution to cognition deficits in diabetes mellitus 1004
Odawara, M., K. Yamashita: Are MELAS and diabetes mellitus caused solely by the same mutation at np 3243 of the mitochondrial gene? 1488
Perez-Bravo, F., M. Serrano-Rios, M. D. Gutierrez-Lopez, M. Calvillan, M. Garcia de los Rios, M. Kocova, J. Dorman, M. Trucco and the Chile IDDM Study Group (G. López, E. Carrasco et al.): Genetic analysis of HLA DRB1, DQA1 and DQB1 alleles and susceptibility to IDDM in Chilean subjects 378
Petrovsky, N., L. C. Harrison: HLA-matched control subjects are essential in studies of susceptibility to IDDM 125
Pozzilli, P., R. Buzzetti, G. Bottazzo, R. Tosi: Response from the authors 126
Pujol-Borrell, R., D. Jaraquemada Pérez de Guzman: Reply to Norazmi et al. 876
Quatraro, A., P. Roca, C. Donzella, R. Acampora, R. Marfella, D. Giugliano: Acetyl-L-carnitine for symptomatic diabetic neuropathy 123
Razzaque, M. S., T. Taguchi: Increased expression of type III and type IV collagen in diabetic nephropathy 632
Roe, M. W., B. Spencer, M. E. Lancaster, R. J. Mertz, J. F. Worley III, I. D. Dukes: Absence of effect of culture duration on glucose-activated alterations in intracellular calcium concentration in mouse pancreatic islets 877
Schnedl, W. J., E. C. Reisinger, T. R. Pieber, M. Neubauer, E. Balaun, G. J. Krejs, P. Hopmeier: Haemoglobin Graz, a novel haemoglobin variant 122
Selvais, P. L., J. M. Ketelslegers, M. Buysschaert, M. P. Hermans: Plasma endothelin-1 immunoreactivity is increased following long-term dietary supplementation with ω-3 fatty acids in microalbuminuric IDDM patients 253
Sigal, R. J., M. B. Freire, A. S. Krolewski: Could differences in body mass index and/or insulin sensitivity explain the association between parental diabetic nephropathy and risk of diabetes in offspring? 1486
Silvestre-Aillaud, P., D. BenDahan, V. Paquis-Fluckinger, J. Pouget, J. F. Pelissier, C. Desnuelle, P. J. Cozzone, B. Vialettes: Could coenzyme Q10 and L-carnitine be a treatment for diabetes secondary to 3243 mutation of mtDNA? 1485
Simpson, L. O.: Vascular factors in diabetic neuropathy: comment 872
Songini, M.: Incidence of IDDM in southern Europe 1491
Soulis-Liparota, T., M. Cooper, M. Dunlop, G. Jerums: Response from the authors 1493
Tarnow, L.: Response from the authors 1496
Tesfaye, S., R. Malik, J. D. Ward: Response from the authors 874
Thomas, A. W., R. Morgan, A. Majid, A. Rees, J. C. Alcolado: Detection of mitochondrial DNA mutations in patients with diabetes mellitus 376
Torffvit, O.: Is human insulin without effect in the diabetic rat? 1492
Walker, J. D., R. A. Dodds, J. J. Bending, G. C. Viberti: Monitoring kidney function in diabetic nephropathy 252

EASD News Section

1, 13, 19, 21, 23, 25, 29, 33, 39, 48, 53

Book review

254

Errata

254, 1496

List of referees

1497

Author Index

1501

Subject Index

1506

Contents of Volume 38

I

Supplement 1 to Volume 37

Abstracts A 1
Abstracts of the 31st Annual Meeting of the European Association for the Study of Diabetes Stockholm, Sweden, 12–16 September 1995
Agenda for the 31st General Assembly of the European Association for the Study of Diabetes, Stockholm, 15 September 1995 VI
Author Index A 287
Minutes of the 30th General Assembly of the European Association for the Study of Diabetes, Düsseldorf, 30 September 1994 I
Organisation section A 308